



## NATIONAL SCIENCE FOUNDATION

### Notice of Intent to Prepare a Comprehensive Environmental Evaluation Under the Antarctic Conservation Act of 1978, as amended

**AGENCY:** National Science Foundation

**ACTION:** Notice of Intent to Prepare a Comprehensive Environmental Evaluation (hereinafter CEE) for Continuation of United States Antarctic Program (USAP) Activities

**SUMMARY:** The National Science Foundation (NSF) announces its intent to prepare a CEE pursuant to the Antarctic Conservation Act, 16 U.S.C. 2401, *et seq.*, as amended, (ACA) and its implementing regulations, and in accordance with the procedures of the Protocol on Environmental Protection to the Antarctic Treaty. The purpose of the CEE is to evaluate the potential environmental effects of continued USAP activities in Antarctica and maintaining or enhancing capabilities that support the USAP. In addition, this CEE will update baseline descriptions of the USAP presented in the 1991 Final Supplemental Environmental Impact Statement for the United States Antarctic Program. (Supplement). NSF originally published a Programmatic Environmental Impact Statement (PEIS) in 1980 and reprinted and redistributed the PEIS in 1984. As noted, a Supplement was prepared in 1991 and project-specific impact analyses have been consistently conducted starting in 1991 and continuing through 2016. By this notice, NSF is announcing the beginning of the scoping process to solicit public comments and identify issues to be analyzed in the CEE.

**DATES:** This notice initiates the public scoping process for the CEE. Scoping comments on issues may be submitted in writing until October 15, 2016. To be eligible for inclusion in the Draft CEE, all comments must be received prior to the close of the scoping period. NSF will provide additional opportunities for public participation upon publication of the Draft CEE.

**ADDRESSES:** Written comments should be addressed to Dr. Polly A. Penhale, Environmental Officer, Room 755, Division of Polar Programs, National Science Foundation, 4201 Wilson Boulevard, Arlington, Virginia 22230 or by e-mail at [CEE.comments@nsf.gov](mailto:CEE.comments@nsf.gov)

**FOR FURTHER INFORMATION CONTACT:** For further information regarding the CEE process, please contact: Dr. Polly A. Penhale, Environmental Officer, at [CEE.comments@nsf.gov](mailto:CEE.comments@nsf.gov)

**SUPPLEMENTARY INFORMATION:**

History of the United States Involvement in Antarctica

The United States has been active in Antarctica since its discovery and exploration in the 1800's and has played a crucial role in building the international cooperation necessary for establishing a peaceful human presence on the Earth's last undeveloped continent. Through the Antarctic Treaty, which went into effect with 12 original member nations in 1961, the United States and 52 other nations have agreed to avoid militarization or conflict over territorial claims in the Antarctic Treaty Area, the area of the earth from the South Pole to 60 degrees south latitude. Treaty nations are dedicated to international cooperation, scientific study, and the protection of Antarctica's distinctive environment.

The United States Antarctic Program (USAP)

Since 1956 and without interruption, Americans have been conducting science and education programs in Antarctica. The 2,500 or so American scientists, administrators, and supporting personnel involved in these activities make up USAP. Three year-round research stations are maintained by the USAP: McMurdo, Amundsen-Scott South Pole, and Palmer. From October through February, field research camps are established for research. McMurdo Station, the largest station in Antarctica is USAP's logistics hub and a center for scientific studies. The Amundsen-Scott South Pole Station supports astronomy, upper atmosphere science, meteorology, glaciology, and earth sciences studies. Palmer Station, on Anvers Island just west of the Antarctic Peninsula, is primarily a marine biology center and also supports upper atmospheric sciences and other studies.

USAP transportation infrastructure includes vessels, aircraft, and tractor-based traverse capabilities. USAP operates two research vessels (the Laurence M. Gould and the Nathaniel B. Palmer) and deploys a fuel tanker, resupply vessel, and a United States Coast Guard ice breaker once annually. The United States Air National Guard and Air Force operate LC-130 and C-17 aircraft supporting intracontinental and intercontinental transport of equipment, material, and people. In addition, DeHavilland Twin Otter and Basler BT-67 aircraft, plus helicopters transport

research teams to remote research locations. Traverses are a critical method to transport fuel and material to South Pole Station, Black Island, and Marble Point from McMurdo Station. Similarly, traverse capabilities are in used to support major deep field science projects.

The NSF has overall management responsibility for USAP and U.S. activities in Antarctica. However, several federal agencies have important roles in the U.S. presence in Antarctica. The Department of Defense assists in planning and provides logistical support to USAP. The Department of Homeland Security's United States Coast Guard provides icebreaker services and other assistance, as required. Further, the United States has strong diplomatic interests in Antarctica and the Department of State coordinates U.S. policy on Antarctica.

#### USAP Activities in Antarctica

USAP activities have increased in complexity and locations over the years. Over 124 science projects were supported by USAP during the 2015-2016 austral summer season. Examples of recent complex USAP projects include ecosystem-scale, multi-disciplinary projects; study of deep subglacial lakes; installation and operation of Project IceCube (a neutrino detector at South Pole Station); upgrades to the South Pole Telescope, and extensive marine and terrestrial seismic projects. The demand for science and education programs in Antarctica is expected to continue increasing over the next decade.

In addition to supporting increasingly complex science and education programs in Antarctica, a safety, environment, and health program has enabled USAP to reduce the health and safety risks to participants and improve environmental protection. USAP has made significant progress in the remediation of old waste disposal sites and in the removal of wastes from Antarctica.

Because the science and education programs supported by USAP are increasing in size and complexity, improved equipment, more specialized facilities, additional electrical power, and improved logistical support are required. USAP has met many of these emerging needs, including construction and operation of the Crary Science and Engineering Center and the Science Support Center at McMurdo Station.

However, approximately 60 years after USAP began much of the infrastructure at each of the three year-round USAP Stations has exceeded its intended life expectancy. USAP stations were originally built to serve the newly developing Antarctic science and education programs of the 1950s and 1960s. With few people or facilities in Antarctica, there was an expeditionary approach to infrastructure development. Energy efficiency and environmental protection were not high priorities. Today, much of the USAP infrastructure cannot meet modern practices without replacement, significant repair, or substantial restrictions in use. Reconstruction of the Amundsen-Scott South Pole Station was completed in 2010; however, the Station and outlying facilities require repairs and ongoing maintenance in order to support current and future science and education programs.

#### Issues and Possible Alternatives for USAP Activities

In 2011, a Blue Ribbon Panel was established by the Directors of the Office of Science and Technology Policy and of the NSF to assess the current USAP operations, logistics and management and make recommendations on a long-term strategy to deliver an efficient and effective national research program. The 2012 report “More and Better Science in Antarctica through Increased Logistical Effectiveness” provided a basis for discussions among USAP participants, managers, scientists, educators, and NSF leadership. From these discussions and others, the following USAP needs have been identified:

- Capacity and flexibility to adapt to the changing needs of USAP science and education in Antarctica over a 35-50 year planning horizon
- Increased energy conservation (reduced energy consumption)
- Increased operational efficiency (e.g., reduced costs and personnel requirements)
- A continued safe and healthy working environment for USAP personnel and visitors
- A continued high standard of environmental stewardship in Antarctica
- Reflecting the “active and influential presence” in Antarctica in a manner consistent with U.S. stature in the international research community
- Reflecting the professional nature of NSF and its scientific activities

These needs are important considerations in meeting USAP's long-term goals and may generate conflicts in the use of available resources. To more fully respond to these needs, NSF has been preparing Master Plans for McMurdo

and Palmer stations. In addition, NSF has been expanding planning efforts to address the needs of other USAP components including South Pole Station, field camps, vessels, and traverse capabilities. To address the issues and fulfill the purpose and need of the proposed action, two alternatives have been identified for evaluation in the CEE:

Alternative A -- Implement the McMurdo Station Master Plan, Palmer Station Master Plan, South Pole Station renovation and maintenance plan; and maintain and improve traverse, field camp, and marine capabilities (Proposed Action). This alternative would include the modernization of McMurdo Station and Palmer Station through reconstruction, consolidation, and renovation of facilities. Critical maintenance as well as facility and infrastructure improvements would be made at the Amundsen-Scott South Pole Station. Traverse, field camp, and marine operations and capabilities would be maintained and enhanced to meet evolving science requirements, improve efficiencies, and continue to protect health, safety, and the environment.

Alternative B -- Maintain facilities and capabilities at the current level of performance. This alternative maintains the “status quo” of USAP facilities and capabilities across the program, including at all three stations, camps, traverse, and vessels. This alternative represents the ‘No action’ alternative. The improvement or replacement of facilities to prevent major structural failures, and mitigate risks to health and safety, would be conducted on a modest, long-term implementation schedule.

The purpose of the public scoping process is to determine relevant issues that will influence the scope of the environmental analysis, including identification of viable alternatives, and guide the process for developing the CEE. At present, NSF has identified the following preliminary resource areas for analysis of potential impacts: air quality, climate, marine and terrestrial biological resources, geological resources, glacial resources, water quality, groundwater resources, aesthetics, wilderness values, solid waste generation, and health and safety. Federal, state, and local agencies, along with other stakeholders that may be interested or affected by NSF’s decision on this proposal are invited to participate in the scoping process.

Dated: August 19, 2016

Nadene G. Kennedy  
Polar Coordination Specialist  
Division of Polar Programs

[FR Doc. 2016-20242 Filed: 8/23/2016 8:45 am; Publication Date: 8/24/2016]